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Intelligence Preparation of the Battlefield
and Predictive Intelligence

by

Major Russell H. Thaden
Military Intelligence

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3 December 1986

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87-2116

87 6 4 072

102-111-899

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188
Exp. Date Jun 30, 1985

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies, USAC&GSC		6b. OFFICE SYMBOL (If applicable) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.		
11. TITLE (Include Security Classification) Intelligence Preparation of the Battlefield and Predictive Intelligence (U)					
12. PERSONAL AUTHOR(S) MAJ Russell H. Thaden, USA					
13a. TYPE OF REPORT Monograph		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 1986/12/03	
				15. PAGE COUNT 45	
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Intelligence deception		
			Battle of the Bulge tactical doctrine		
			Soviet Army surprise		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This monograph examines the ability of intelligence preparation of the battlefield (IPB) to provide predictive intelligence. IPB is the foundation of tactical intelligence and plays a major role in tactical planning prior to the battle. There is a strong expectation that IPB will provide the basis to predict enemy courses of action. Current intelligence doctrine supports the proposition that IPB can determine the most probable enemy course of action. The question this study seeks to answer is whether or not IPB does provide the basis to predict enemy courses of action. First the doctrinal IPB process is discussed to show how it arrives at a determination of the most probable enemy course of action. The IPB process focuses on the effects of terrain and weather together with enemy doctrine to arrive at a conclusion. A number of assumptions are made which have a (continued on other side of form)					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ Russell H. Thaden			22b. TELEPHONE (Include Area Code) (913)684-2138		22c. OFFICE SYMBOL ATZL-SWV

Item 19. Continued

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Next the monograph examines the Battle of the Bulge in December 1944, the Soviet Byelorussian offensive in June and July 1944, and the Soviet Manchurian offensive of August 1945. Each case provides evidence about the difficulty predicting enemy courses of action based on the factors that IPB considers. An analysis of these cases shows that, in each, extensive knowledge of enemy doctrine based on actual combat experience was inadequate to predict enemy courses of action. Once a specific course of action was forecast, subsequent intelligence collection tended to confirm that conclusion. Even the most sophisticated intelligence means did not provide strong enough evidence to cause analysts and tactical commanders to see other possible enemy courses of action.

Finally, this study concludes that there is an important role for IPB to play in providing a tool to help identify feasible enemy courses of action and gaining an appreciation for the terrain on which we will fight. However, IPB does not provide the basis to identify which enemy course of action is most probable or to forecast enemy intentions. Relying on IPB to attempt this task puts the commander in grave risk of suffering the effects of enemy surprise.

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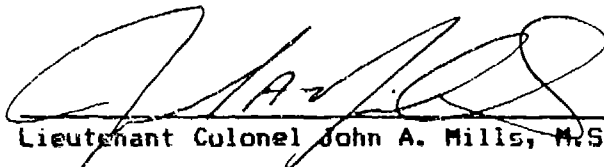
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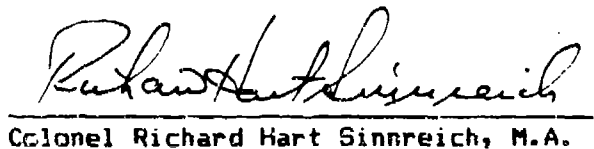
MONOGRAPH APPROVAL


Name of Student: Major Russell H. Thaden

Title of Monograph: Intelligence Preparation of the Battlefield
and Predictive Intelligence

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Accepted this 20th day of December 1987.

Accession For	
NTIS	CRA&I <input checked="" type="checkbox"/>
DTIC	TAB <input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution	
Availability Codes	
Dist	Avail and/or Special
A-1	

ABSTRACT

INTELLIGENCE PREPARATION OF THE BATTLEFIELD AND PREDICTIVE INTELLIGENCE: by Major Russell H. Thaden, USA, 41 pages.

This monograph examines the ability of intelligence preparation of the battlefield (IPB) to provide predictive intelligence. IPB is the foundation of tactical intelligence and plays a major role in tactical planning prior to the battle. There is a strong expectation that IPB will provide the basis to predict enemy courses of action. Current intelligence doctrine supports the proposition that IPB can determine the most probable enemy course of action. The question this study seeks to answer is whether or not IPB does provide the basis to predict enemy courses of action.

First the doctrinal IPB process is discussed to show how it arrives at a determination of the most probable enemy course of action. The IPB process focuses on the effects of terrain and weather on the battlefield together with enemy tactical doctrine to arrive at a conclusion. During this process a number of assumptions are made which have a major impact on the validity of the analysis. These assumptions tend to be implicit rather than explicit so that the tactical decision maker may be unaware of their impact on the conclusions drawn from the IPB.

Next the monograph examines the Battle of the Bulge in December 1944, the Soviet Byelorussian offensive in June and July 1944, and the Soviet Manchurian offensive of August 1945. Each case provides evidence about the difficulty of predicting enemy courses of action based on the factors that IPB considers. An analysis of these cases shows that, in each, extensive knowledge of enemy doctrine based on actual combat experience was inadequate to predict enemy courses of action. Once a specific course of action was forecast, subsequent intelligence collection tended to confirm that conclusion. Even the most sophisticated intelligence means did not provide strong enough evidence to cause analysts and tactical commanders to see other possible enemy courses of action.

Finally, this study concludes that there is an important role for IPB to play in providing a tool to help identify feasible enemy courses of action and gaining an appreciation for the terrain on which we will fight. However, IPB does not provide the basis to identify which enemy course of action is most probable or to forecast enemy intentions. Relying on IPB to attempt this task puts the commander in grave risk of suffering the effects of enemy surprise.

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INTRODUCTION

Intelligence, that is, knowledge of the enemy, the terrain, and the weather, is key to winning in battle. History is replete with examples of commanders who were surprised and who lost because they had inadequate intelligence about the enemy. As the speed, scope, and complexity of tactical operations have increased, so has the need for a systematic way to approach the intelligence problem prior to the battle. Shortly after the Arab-Israeli War of October 1973, the U.S. Army developed a system called intelligence preparation of the battlefield (IPB). As Major Gaun, the IPB project officer described it, "IPB standardizes tactical intelligence analysis through the use of graphics . . . and templates as aids to analysis and a means of disseminating intelligence."¹

Intelligence preparation of the battlefield has become the centerpiece of current intelligence doctrine. During the battle it "provides the basis for situation and target development."² These are the processes that allow the commander to see the battlefield and target the enemy once the tactical fight begins. However, the focus of this paper will be on the use of IPB prior to the battle. Currently, most tactical and operational planning is based on IPB. During this planning the commander and the G3 want to know what the enemy will do. The principal question this study will seek to answer is the extent to which IPB provides a basis to predict enemy actions prior to the battle.

Since IPB is at the heart of the entire tactical intelligence process, it is important to understand what IPB is and is not. This will help us to draw conclusions based on a valid assessment of what IPB can and cannot do for

the tactical planner and operator. In that vein current Army doctrine defines IPB as

a systematic approach to analyzing the enemy, weather, and terrain in a specific geographic area. It integrates enemy doctrine with the weather and terrain as they relate to the mission and the specific battlefield environment. This is done to determine and evaluate enemy capabilities, vulnerabilities, and probable courses of action.³

Since IPB plays such an important role in the tactical intelligence system and in tactical planning, it is necessary to have a clear understanding of the doctrinal precepts that govern the IPB process and what are its capabilities and limitations. The paper will also examine current expectations of what IPB should provide to support tactical planning. These questions are relevant to both contingency planning and planning during actual tactical operations. The focus of the paper will be on the use of IPB to support defensive operations during the initial stages of a war or during a pause in the operations; but the issues raised are relevant to any consideration of the appropriate role of IPB in support of tactical planning.

The paper will examine tactical intelligence doctrine to see what it says IPB is and what IPB can provide. This will include a brief overview of the actual steps in IPB to see how it is done. An important part of this discussion will be the identification of some of the major assumptions implicit in the IPB process and a discussion of how they affect the validity of the results. At the same time it will be apparent that there is a doctrinal expectation that IPB should and can provide the basis to predict enemy actions and intentions.

This paper will look at three historical cases which demonstrate that relying on knowledge of enemy doctrine and the terrain did not always or even consistently provide a reliable basis to predict enemy courses of action. The

first case will look at the Battle of the Bulge which pitted a mature American Army with extensive and sophisticated intelligence capabilities against a surprise German offensive. This provides an opportunity to examine how IPB techniques might have been used and to speculate about their utility in the circumstances of that time. The second case will be the Soviet Byelorussian offensive against the Germans in the early summer of 1944. This case again shows the results of a battle fought between two mature armies. The German defenders placed great reliance on an intelligence assessment based heavily on the same factors that IPR uses today. The final case study will discuss elements of the Soviet tactics during their final offensive in Manchuria against the Japanese in 1945. This case highlights the extent to which a very highly skilled Soviet Army made tactical use of extremely difficult terrain to surprise and outmaneuver its enemy.

In analyzing these cases, this paper will draw on some aspects of the theory of intelligence to show why predicting courses of action before the fact has always been and remains extremely difficult if not impossible. It will examine the prospects for IPB being able to provide more reliable predictive intelligence. In this discussion, the paper will briefly comment on what sort of intelligence is necessary to predict enemy intentions and how it relates to IPB. Finally, it will consider if there is a need to modify IPB doctrine and to expect more realistic results rather than predictions that often are based largely on speculative analysis and broad assumptions.

EXPECTATIONS

Current and emerging tactical doctrine gives the clear expectation that the intelligence system is expected to predict enemy actions. For instance FC 100-15, Corps Operations, states that the G2 "provides insight into probable enemy actions based on IPB and analyzes and develops targets based on

commander's guidance."⁴ The more recent draft FM 100-15, also entitled Corps Operations, makes the similar point that "the G2 must predict the most probable enemy course(s) of action and thereby enable the commander to make decisions faster than the enemy."⁵ Division and brigade level doctrine strengthens this point even further when it describes how IPB provides "a comparative data base of enemy capabilities and courses of action which, in turn, forms the basis for predicting intentions."⁶ A recent briefing by students of the war colleges on a proposed future structure for the Army makes it clear that the doctrinal call for predictive intelligence is likely to continue into the future.⁷

Interestingly, FM 100-5, Operations, the Army's capstone operational and tactical manual, does not seem to be as specific or strong in calling for predictive intelligence. It describes IPB as a "comprehensive analysis of the effects of enemy capabilities, terrain, and weather on operations."⁸ It makes no mention of IPB providing predictions of enemy intentions or most probable courses of action. In describing campaign planning, it does state that, among other things, "reasonable assumptions about enemy intentions and capabilities . . . form the starting point of campaign planning."⁹ However this seems to be the only major doctrinal publication that does not call on IPB to provide predictive intelligence.

The instruction given in Army service schools clearly supports the current and draft doctrinal manuals' call for predictive intelligence. In describing the IPB process, the Command and General Staff College reference on the commander's estimate states that

IPB concentrates on building a data base prior to hostilities and highlights applicable data in support of tactical operations. This results in an intelligence estimate and an analysis of the battlefield area which show probable enemy courses of actions and intentions.¹⁰

A number of recent journal articles, some by senior commanders, emphasize even more strongly the desire for predictive intelligence. General Otis, the commander of U.S. Army Europe, clearly expects IPB to achieve its doctrinal claim of providing probable enemy courses of action.¹¹ A currently serving division commander calls even more strongly for predictive intelligence when he says, "At division level, the commander needs to know where the enemy commander intends to be and what he intends to accomplish twelve hours out. . . . Focus on prediction, regardless of the level of command."¹² Major Bevilacqua sums up this view when he states that the intelligence task "in a maneuver oriented environment remains unchanged: to provide the commander with decision-oriented combat intelligence of what the enemy will do at a given time in the future."¹³

It is not just combat arms commanders who call upon the military intelligence community to predict what the enemy will do. Current thought within military intelligence shares the same feeling that we should predict enemy intentions. A recent field circular on tactical intelligence analysis states that as an analyst, "Your job is difficult because you must predict what the enemy will do. Your means of using what you know to predict the enemy is to develop a conceptual threat model."¹⁴

It does not matter whether the intelligence product is called a most probable course of action, enemy intentions, or predictive intelligence. What seems clear is that there is an expectation that IPB will provide the basis to tell what the

enemy will do before he does it. This is seen as being necessary in order to support tactical planning prior to the battle.

These predictions are not at all the same thing as early recognition and warning of an enemy course of action that is already underway. The tactical planning with which this paper is concerned takes place prior to the war or during a pause in the operations as friendly forces prepare for or assume the defense. The enemy simultaneously prepares his attack plans. In this very realistic circumstance IPB is being charged to predict the enemy's most probable course of action before he has committed himself. Based largely on the results of this IPB, the friendly forces prepare their plans. As the enemy begins his operation, situation development will track his forces to confirm or refute the friendly expectations. As critical as it is to battlefield success, it is clear that situation development comes after whatever predictions may be derived from the IPB process. Having established the requirement placed on IPB, the next step to understanding the ability of IPB to support predictive intelligence is to examine the doctrine.

IPB DOCTRINE

IPB is a systematic method of analyzing the enemy, terrain, and weather to prepare for and conduct combat operations. Current Army intelligence doctrine states that IPB "clearly portrays what enemy forces can and cannot do on the battlefield and the probability of the adoption of a specific course of action."¹⁵ This section of the paper will focus most closely on how IPB doctrine supports its stated ability to determine the

specific course of action an enemy will most probably adopt. This is critical because if tactical planning is based on predictions of specific enemy actions before they occur and the prediction is flawed, the consequences could be disastrous.

IPB is a five part process that consists of the following steps: evaluation of the battlefield area, terrain analysis, weather analysis, threat evaluation, and threat integration. Prior to recent changes in doctrine, threat evaluation was the first step in IPB. Evaluation of the battlefield area was called evaluation of the area of operations.¹⁶ These changes are more in the vein of refinements and do not change the central purpose or thrust of IPB. The actual sequence of steps is not crucial as IPB is a continuous process.

The first step in IPB, battlefield evaluation, assesses the overall nature of the enemy and the environment. It helps determine what information will be needed and determines the area of operations, area of influence, and area of interest. During this first step the analyst gathers the maps, templating material, weather data, and special terrain products needed.¹⁷

Because they are so closely related, we will look at terrain and weather analysis together. "Terrain analysis reduces the uncertainties regarding the effects of terrain on combat operations."¹⁸ Within the purpose of evaluating the ability of IPB to forecast the most probable enemy course of action, the initial terrain analysis plays a key role. "The analyst must determine where enemy and friendly forces can and cannot move and how the terrain affects this movement. The effect of weather on trafficability is also a primary consideration."¹⁹

The outcome of the terrain analysis includes a combined obstacles overlay. "The influence of obstacles on mobility makes them one of the most

important considerations in terrain analysis.²⁰ By the process of eliminating unsuitable terrain, the analyst establishes which avenues of approach exist within the area. "Avenues of approach and mobility corridors are essential to the IPB process. They are the basis for integrating the enemy, weather and terrain. They delineate the area in which enemy activity should occur."²¹

It is worth keeping in mind that the combined obstacle overlay doctrinally incorporates average weather. Variations of the basic overlay should be prepared that reflect normal seasonal weather variation.²² This has the potential to lead to problems if the weather is not average or normal. More than one commander has suffered major reverses because of unseasonable weather. Easily traversable terrain can rapidly become impassable or the reverse can happen with equal speed.

Although this initial terrain and weather analysis only describes areas where enemy activity should occur, the whole tenor of IPB is that it will determine the most probable enemy course of action based largely on an analysis of the terrain and enemy doctrine. The analyst is advised to "select the avenues of approach that best support the capabilities to move, shoot, and communicate."²³ Although this analysis is not specifically intended to determine which avenue of approach the enemy will choose, the clear thought is that the enemy is more likely to choose an avenue that provides fewer obstacles and better mobility. This is strengthened in an assertion that while movement through vegetated areas is not totally impossible, "minimum doctrinal rates of speed through these areas could not be met."²⁴ This carries the clear implication that terrain mobility is central to the enemy decision.

The fourth step in the IPB process is threat evaluation which

consists of a detailed study of enemy forces, their composition and organization, tactical doctrine, weapons and equipment, and supporting battlefield functional systems. Threat evaluation determines enemy capabilities and how they operate relative to doctrine and training or how they would fight if not restricted by weather and terrain.²⁵

The threat evaluation process has three steps. First a detailed data base of threat information is developed. Then threat capabilities are identified and evaluated. To focus the process, "these capabilities are evaluated as they relate to our mission and the battlefield area."²⁶ Finally a file of doctrinal templates is developed that show how the enemy would theoretically and ideally like to conduct his operations.

These templates are the primary products of the threat evaluation. They provide graphic displays which model how the enemy might look according to doctrine and training without the effects of weather and terrain considered. In addition to showing how the enemy might deploy, they are intended to be useful in "determining enemy intentions."²⁷ Since it is not possible to template every conceivable enemy capability, it should be noted that the process already implicitly discounts those enemy capabilities that the analyst considers to be only remote possibilities.

The final and most important step in the IPB process is threat integration which "relates enemy doctrine to the terrain and weather to determine how the enemy might actually fight within the specific battlefield environment. Threat integration is sequentially accomplished through the development of situation, event, and decision support templates."²⁸ Before discussing the threat integration steps, it should be observed that this final part of the IPB process doctrinally only shows how the enemy might fight which is not necessarily the same as how he actually will fight.

The situation templates are modified doctrinal templates. They show how the enemy might deviate from his doctrine to deploy and fight on a specific piece of terrain. In developing these templates, the analyst does consider enemy attempts to achieve surprise. However, the primary considerations are the physical aspects of the terrain and weather which determine whether the enemy has the room to maneuver according to his doctrine.²⁹

From the situation templates, event templates are prepared which show projected battlefield events and "enemy activities which provide indicators of the enemy course of action. It is a projection of what will most likely occur if the enemy adopts a particular course of action." In conjunction with the event template, the analyst prepares an event analysis matrix which applies the time factor to the process. It portrays the timing of expected enemy events in a logical sequence. "Before combat, the event analysis matrix and event template illustrate possible enemy courses of action as a basis for comparing friendly courses of action. During combat operations, it focuses on enemy probable courses of action."³⁰

While there doctrinally should be an event template for each feasible enemy course of action, in practice it is more the norm to portray only those courses of action which seem most likely. This tendency is reinforced strongly by service school instruction such as the Command and General Staff College in which students are required to prepare only one event template for any given scenario. By so doing, the analyst virtually assumes away any enemy course of action that he does not template. The templates that are prepared will be invaluable in tracking the enemy if he adopts one of the templated courses of action. They may be less useful if the enemy adopts a course of action that the analyst did not foresee and template.

The last step in threat integration is the decision support template which "is essentially the intelligence estimate in graphic form. . . . It does not dictate decisions to the commander, but it does identify critical events and threat activities relative to time and location which may require tactical decisions."³¹ The decision support template still portrays all of the avenues of approach into the friendly area that the analyst found and prioritized during terrain analysis. The template shows decision points based on situation and event templates that show how the enemy "might" fight on this specific terrain. Yet at this point the intelligence analyst is required to project the most probable enemy course of action.

From the preceding discussion, it is apparent that the basic data that IPB focuses on is the terrain, weather, enemy doctrine, and the enemy order of battle. From this data a graphic intelligence estimate is prepared which is used to support tactical planning by providing the most probable enemy course of action. Before going on to examine the historical cases, let us examine some of the underlying assumptions that are normally made during the IPB process.

The first major assumption is that the enemy commander will closely follow his own doctrine. Major Gaun made this very explicit when he wrote that "we know that by doctrine the enemy is committed to predictable patterns of behavior."³² Not only does this assume that the enemy doctrine is structured enough to provide a basis for prediction, it also assumes that we thoroughly understand the doctrine. While historical observation of Soviet style forces suggests that this may be true generally for their forces, it may be an invalid assumption with regard to unexpected conflicts with other potential enemies. Even against a Soviet force, the personality and experience of the specific commander can be a more important determinant of

actual enemy behavior than the general norms of doctrine. Finally, this assumption implicitly discounts the enemy's understanding of the principles of surprise. As will be apparent in the cases, the enemy can use his normal patterns of behavior as a tool of deception.

In developing the doctrinal and situational templates, IPB depends heavily on the assumption that the enemy will commit the force that doctrinally will fit in the respective avenues of approach. It is intuitively obvious that the enemy can commit fewer forces on an avenue of approach than it can easily support. However, this is normally not templated except for those avenues where we already have decided that the enemy is likely to commit limited forces. On the other hand, it is also not normal to template more than doctrinal size forces on an avenue of approach. If an analyst were to attempt to make such a template it would be very difficult because, by definition, this is outside of the norms. Yet, when this is not done, the analyst assumes away the possibility that the enemy may choose to violate his norms and take the risk of higher than normal troop concentration on a specific avenue of approach.

The entire IPB process implicitly assumes away the enemy commander's consideration of our own course of action in developing his plan. The threat templates are developed early to support friendly tactical planning. This inherently tends to assume that terrain mobility considerations will be more important to the enemy than the disposition and strength of our forces. Because we have not decided on our own plan, IPB has no way to include it in the analysis. As we will see from the case studies, this is a very weak assumption. If possible, an attacker prefers to design his attack against a specific enemy disposition rather than to fight on what is theoretically the best avenue of approach.

All operational and tactical planning is governed by the objective it is designed to accomplish. To accomplish a valid IPB with regard to establishing probable enemy courses of action requires either actual knowledge of enemy operational objectives or assumptions about them. When conducting IPB as a part of peacetime contingency planning or before a major operation, specific knowledge of enemy objectives is quite likely to be very sketchy. In the absence of such concrete information, assumptions must be made and they will inherently be speculative. Whether these assumptions are made at the tactical headquarters performing its IPB or taken as given from a higher operational headquarters, their fundamental nature as assumptions and not facts remains the same.

The success or failure of IPB as a means to predict enemy actions is closely tied to the validity of these assumptions. Many of these assumptions tend not to be explicitly stated as a part of the IPB process. As a result, the commander may well make his tactical decision based on assumptions of which he is unaware. This tends to increase greatly the risk he assumes. During actual tactical operations the IPB products are the foundation of the situation development process which is intended to help the commander see the battlefield. If the IPB process is faulty in attempting to predict an enemy course of action without adequate evidence, situation development will be forced to react to enemy initiative and may not accomplish its tasks.

HISTORICAL CASES

ARDENNES 1944

The Battle of the Bulge provides the opportunity to look at the intelligence preparation of a major American defensive operation against a modern heavily mechanized force. Although the German offensive ultimately

failed, at the time it was a total surprise and temporarily took the initiative away from the allies. From this perspective it is a good case study through which to examine the utility of techniques now used in IPB and also to see if IPB techniques that were not in use at that time might have proved helpful in preventing the surprise.

The Battle of the Bulge is too well known to recount in detail. This paper will look at aspects of American intelligence prior to the German attack, and will focus largely on the U.S. First Army. Examining what was done at field army level provides a useful analog to the modern corps because at that time it was the field army which fused tactical intelligence with the external intelligence information provided by national agencies and the Air Force. Of particular relevance is the fact that the field army was the lowest level to receive the highly sensitive signals intelligence that ULTRA provided from decoded German high-level ciphers.³³

By the fall of 1944 the First Army attack in the west had slowed from the rapid pace of the summer. When First Army resumed offensive operations, it made only slow progress through the German defenses in the Aachen and Hurtgen Forest areas. As the pace of the Allied advance slowed in September, Hitler began to plan a counteroffensive in the west, which was where Germany was most immediately threatened and the only theater where he could hope to achieve strategic results.³⁴ Hitler ordered preparations for an attack in the Ardennes with the objective of crossing the Meuse and taking Antwerp.³⁵

According to Hugh Cole, Hitler chose the Ardennes for several reasons. The American defenses were known to be weak. Hitler viewed the Ardennes as the seam between the American and British forces. Distance to the strategic objective of Antwerp was short. Although there would be limited maneuver room in the Ardennes, that had the advantage of making it possible to use fewer

forces. There was a good area for concealed concentration of forces in the Eifel just east of the Ardennes. Finally, an attack in the Ardennes would relieve the threat to the strategically vital Ruhr industrial area.³⁶

In Hitler's view, Germany had reached the culminating point of the defense which, as Clausewitz says, is the time "when the defender must make up his mind and act, when the advantages of waiting have been completely exhausted."³⁷ It was apparent that further defense and waiting would only increase the already disproportionate allied advantages in strength and airpower. However slim the chances of success, they seemed to Hitler to be better than the certain defeat that would come through continued defensive operations. As will become apparent, the allies almost completely assumed away the possibility that Hitler or his commanders would react this way.

The Ardennes was virtually the last place that First Army or its higher headquarters would have expected the Germans to launch a major offensive. As Cole points out, the Ardennes "was, with the exception of the Vosges, the most difficult terrain on the entire line of the Western Front."³⁸ The area is cut with deep gorges and steep valleys. There are a number of rivers that pose obstacles to military movement. The weather was harsh and the heavy precipitation of November and December made cross country movement extremely difficult.³⁹

Beyond the difficulties inherent in the terrain itself, the senior allied commanders did not see any logical objectives that could be reached through the Ardennes. As General Bradley, the 12th Army Group commander, observed, there were no facilities or terrain features of importance in the area. In addition, there were too few American units in the area to be a logical target for a force oriented attack.⁴⁰

Although no IPB was conducted in modern terms, a terrain and weather analysis of the Ardennes in November 1944 would have shown extensive obstacles with totally inadequate avenues of approach for any major mechanized force. With no apparently lucrative objectives in the vicinity, the analyst would have had extreme difficulty in projecting offensive avenues of approach through the area. If a major enemy offensive had been considered feasible, the avenues of approach through the Ardennes would not have seemed a logical choice for the enemy.

The Germans looked at the Ardennes from a different perspective. Although they had not experienced heavy fighting in the Ardennes, the experience of 1940 showed them that mechanized forces could move through the Ardennes rapidly when relatively unopposed. Hitler's hope was to strike weak American forces and rapidly overwhelm and penetrate their defenses. East of the Ardennes the Eifel provided excellent concealment for assembly of the German forces. It was served by rail lines feeding in from Koblenz, Cologne, and smaller bridges over the Rhine.⁴¹

An IPB analyst could have recognized the possibility that German forces could be concealed in the Eifel, but would also have seen the excellent rail lines leading north and south out of the Eifel. This would have allowed the Germans to use forces in the Eifel against the First Army's main effort north of the Ardennes or the parallel operations of Patton's Third Army south of the Ardennes. As events transpired, the analysts at that time considered those courses of action to be more probable than an attack into the Ardennes itself. As Forrest Pogue points out, they felt that

although the enemy had come through the Ardennes in 1870 and again in 1940, the terrain was not suited for mobile warfare, particularly in the winter months when bad weather was likely to make the poor road net even less valuable than usual.⁴²

The third step in IPB is threat evaluation which is based on a thorough understanding of enemy doctrine. By this point in the war there can be no doubt that the Americans understood German tactical and operational doctrine. What is important to this case is the way the Americans expected the Germans to fight. This was colored by who they thought was in charge. Since Rundstedt had returned to command in the west, he had conducted a skillful defense and had worked what seemed a virtual miracle in establishing a coherent defense along Germany's western frontier. As late as 10 December, the First Army G-2 expected Rundstedt to continue fighting in the same professional manner and, in a none too subtle reference to Hitler, noted that Rundstedt "obviously is conducting military operations without the benefit of intuition."⁴³

While the First Army G-2 understood Rundstedt's methods and doctrine, there was no doctrinal templating as such done by First Army. To speculate for a moment, what templates would they have logically prepared at the First Army in November 1944? The major focus would necessarily be to template the various kind of defensive postures that the Germans could be expected to assume. This would include templates of strong forward defenses with limited counterattack forces and templates of a deeper defense with strong counterattack forces. Templates of German offensive action could have been prepared, but would presumably have had a lower priority as there was no reason and insufficient evidence to support the idea that a major German attack was in preparation.

Doctrinal templates should be prepared based not only on general enemy doctrine, but based on specifics that apply to the situation. In this case, it is apparent that relying on such an approach would have been very misleading. The Americans understood Rundstedt's fighting doctrine and

believed he was in control in the west. On that basis they expected the Germans to conduct a conservative defense and attempt to preserve their forces as long as possible. What they did not understand was that Hitler effectively took control in the west and planned the operation.⁴⁴ Hitler had his own doctrine.

If terrain analysis, weather analysis, and threat evaluation would not have pointed specifically to the Ardennes as the most probable scene of a major German counteroffensive, threat integration would have pointed to almost anyplace except the Ardennes. The first step in threat integration brings together the terrain analysis showing avenues of approach with the doctrinal templates showing how the enemy would like to fight. Absent any good avenues of approach into the Ardennes, it is difficult to see how the analysts of 1944 could have generated plausible situation templates of a German attack into the American forces in the Ardennes. Without such situation templates, there could be no event or decision support templates for that eventuality.

A problem that complicates any intelligence effort is enemy deception. In this case the Germans had a two part cover and deception plan. First was a relatively obvious concentration of forces east of Aachen in the Cologne area. Second was a very well concealed movement of forces into the Eifel opposite the Ardennes. As late as possible, they shifted the northern forces to the south as part of the main effort. According to Cole, since the Germans could not totally conceal the presence of some forces in the Eifel, the cover story portrayed that "a secondary and relatively small force of burned-out divisions was being gathered in the Eifel to contain the right flank of the expected Allied penetration."⁴⁵

The Battle of the Bulge is not just a good case study through which to examine the potential of IPB to predict enemy courses of action. It also is a

good case to see the dynamic relationship between IPB and situation development. This case makes it clear how current situation development can be skewed dangerously by an incorrect appraisal of enemy intentions. Although there was substantial evidence of unusual German activity, it was misinterpreted and the allies believed the German deception story. Expecting to see forces gathered for a continued defense with a limited counterattack, that is exactly what the allies thought they saw in the available evidence.

According to MacDonald, as early as September there was evidence of Hitler's intentions. Although he kept his plans a very close secret, in September Hitler told Ambassador Oshima from Japan that he planned to launch a major counteroffensive in the west sometime after the beginning of November. Because the U.S. was still able to decrypt Japanese diplomatic messages, this information was in the hands of American intelligence in Washington almost immediately.⁴⁶

By early December, there was uncertainty among the allies as to the location of the 6th Panzer Army. First Army placed it between the Rhine and the Roer Rivers. The important point is that even though they did not know its precise location, the analysts at First Army still expected that its most probable course of action would be to counterattack against their main effort.⁴⁷ In fact, First Army was fairly accurate in locating Sixth Panzer Army. What they did not highlight was its capability to move southwest into the Ardennes as an alternative to being a counterattack force. There was even less interest in the Fifth Panzer Army. The belief was that it was resting and refitting after the fight in the Roer River area in November.⁴⁸

Ralph Bennett gives a detailed analysis of the ULTRA information available prior to the attack. The allies and First Army knew that the Germans had moved large numbers of aircraft to the west in November. The

hasty transfers were needed to meet the original November attack date. When the attack was postponed, the aircraft remained, but the allies still had no idea why they were there.⁴⁹ There was strong evidence of unusual and hurried troop movements, shifting of resources from other theaters, and the creation of new armored reserves. There was even clear evidence of repeated German reconnaissance of the Meuse crossing sites west of the Ardennes. Bennett concludes that "ULTRA intelligence was plentiful and informative, but it did not point conclusively towards an offensive in the Ardennes."⁵⁰

There are some important observations that help explain why the Americans were surprised and why IPB may not have been able to prevent that surprise. Lacking a specific breach of German security, the Americans had no direct knowledge of Hitler's intentions or new strategic objective in the west. Even Hitler's senior commanders did not know his objectives until well into the planning process. An analysis of probable enemy courses of action based on a speculative and incorrect assumption of enemy strategic and operational objectives had a very weak foundation indeed. Given the extreme security consciousness of many of our potential enemies, it would be unreasonable to assume that we will know specific enemy strategic and operational objectives any better than First Army did in 1944.

The Americans had the initiative and expected the Germans to respond to the Allied main effort north of the Ardennes.⁵¹ The tendency to see the enemy in the mirror of our own intentions is very strong. IPB should help overcome this problem, but there is nothing in the process that inherently will keep the analyst from coloring his views with the knowledge of friendly intentions.

Stephen Ambrose summed up the surprise when he describes a memorandum of 23 December in which General Eisenhower

confessed that although he [Eisenhower] had been aware of the building German reserve, that although he knew

tank units had been pulled out of the line, and that although he had been told that "a counterattack through the Ardennes was a possibility," he did not think it probable that the enemy would try it. "Nevertheless," he admitted, "this is exactly what he did."⁵²

Objectively, Eisenhower was right. Although the German attack was a possibility, there was insufficient evidence to regard it as the most probable course of action that the Germans would adopt. In November 1944 a good IPB would not have pointed to the Ardennes. What it could have done was provide a systematic method to identify all German capabilities. Then as situation development tracked German activity, it should have been possible to provide early warning that the Germans were capable of conducting a counteroffensive.

Without the luxury of hindsight, it is clear, in this situation it would have been virtually impossible for the allies to decide in advance that the Ardennes offensive was the most probable German course of action. The terrain was too difficult and the forces were not adequate. The allies probably could and should have identified both this offensive and Rundstedt's proposal to attack at Aachen as German capabilities.

A point to keep in mind is that given allied knowledge of German doctrine and the terrain, it is entirely possible that the assessment that the German reserves were intended for a counterattack after the allied offensive was a sound conclusion. In the final analysis, it does not matter what the actual probabilities of adoption of any given course of action were. What mattered was being able to identify the possible courses of action and then determine which the Germans were executing as soon as possible.

As this case shows, the enemy is perfectly capable of choosing to use terrain that does not appear to favor his operations. It is a gamble because he must achieve quick success or failure will probably be total. Whether he succeeds or fails, in the end his chances of achieving surprise in such

terrain are great. If the overall Allied superiority in 1944 had not been so totally overwhelming, the German offensive would have been even more dangerous than it seemed to be at the time. As it was, the surprise was so complete that the recriminations still reverberate more than forty years later.

RUSSIAN 1944 SUMMER OFFENSIVE

The case of the Soviet summer offensive is perhaps more an operational than a tactical example of the potential problems with forecasting enemy behavior based on his most probable course of action. However it is useful to examine because it shows another example of how a skilled attacker can exploit a defender's expectations to achieve surprise. On the German side, this case shows the potential risks of basing a friendly course of action on an analysis generated by something very similar to IPB.

After the Soviet advance to the west stopped in March 1944, both sides prepared for the resumption of Soviet offensive operations that they knew would soon begin. When the Red Army stopped, its main effort was the 1st Ukrainian Front south of the Pripet Marshes. Based on a reasonable analysis of the information available, the Germans fully expected that the 1st Ukrainian Front would still make the main effort in the upcoming summer offensive.⁵³

Terrain and distance considerations were part of the reason the Germans expected the Soviet main effort still to be south of the Pripet Marshes. The 1st Ukrainian Front's advance had taken it past the marshes and within striking distance of a number of strategic objectives. Germany's Balkan allies, Hungary and Rumania, were close at hand. Warsaw was to the northwest. However, the most threatening potential Soviet objective from the German perspective was the Baltic coast 200 miles from the lead elements of the 1st Ukrainian Front. With open terrain and only the Vistula River to cross, it

seemed that the Red Army had the opportunity to strike northwest to surround and trap the bulk of Army Groups Center and North.

The terrain to the north of the Pripet Marshes did not seem to the Germans to provide the advantages of the southern approach. Although it was relatively open, there were numerous forests and the Red Army would have to cross several major rivers. The southern flank of Army Group Center was protected by the Pripet Marshes and marshes along the Beresina River would make a Soviet advance harder.⁵⁴ Finally, the distance to strategic objectives was as great or greater than in the south and there did not seem to be the opportunity for a massive encirclement operation to destroy German forces.

Even more than the Americans, the Germans had the experience to know and understand the tactical and operational doctrine of their enemy. They understood the techniques of concentrating forces that the Red Army used to penetrate German defenses. They also understood the enemy force structure. Typically, a Russian front had one tank army. Fronts on secondary zones of advance might not have a tank army at all. At that time none of the Byelorussian fronts north of the Pripet Marshes had tank armies.⁵⁵ When the Germans looked at the dispositions of Russian tank forces in spring 1944, the 1st Ukrainian Front south stood out with not two, but three separate tank armies and two cavalry-mechanized groups.⁵⁶ The obvious importance of the 1st Ukrainian Front was enhanced further by the appointment of Marshal Koniev as its permanent commander. Koniev was known to be one of the top Soviet commanders.

As the Germans conducted their analysis or threat integration, it is apparent that they had good reason to believe that the most probable Soviet course of action would be a main attack by the 1st Ukrainian Front. Terrain analysis and threat evaluation would clearly have pointed that way. Although

they could not have known the specific Soviet objectives, it was apparent that several strategic objectives could be reached from the Ukraine.

Based on their assessment of probable Soviet intentions, the Germans prepared their plans. They pulled together a strong force of 38 divisions which included the bulk of their panzer forces to oppose the expected Soviet attack south of the Pripet marshes.⁵⁷ In particular the Germans pulled forces from Army Group Center. Field-Marshal Model, the commander of the German Army Group Northern Ukraine, was optimistic because for the first time the Germans had succeeded in concentrating their defense against the Soviet main effort.⁵⁸

Despite their thorough intelligence preparations and logical analysis, the Germans could not have been more wrong in their assessment of Soviet intentions. The Germans were right in assuming that the Soviets would try to destroy Army Group Center. What they did not know was that the Soviets had decided to attack at the nose of the salient rather than on its flanks.⁵⁹

The Soviets prepared for the summer offensive with the tightest possible security. Only five men knew the overall plans and objectives. The major tank forces in contact in the south were left there to deceive the Germans. At the same time reserves were moved under stringent security to make the main attack in the north.⁶⁰

The Soviet deception effort succeeded almost totally. The Germans remained focused on the Soviet forces south of the Pripet marshes. In late May the LVI Panzer Corps was transferred out of Army Group Center leaving the latter with no operational reserves. Ironically, the Germans were not unaware of the shift of additional forces into the sector opposite Army Group Center. However, this was consistent with the belief that supporting attacks would occur to facilitate the main effort in the south.⁶¹ Like the Americans a few months later, the Germans tended to see the evidence of new concentrations of

enemy forces in the context of the assessed most probable enemy course of action. Nothing short of a major breach of security would have been enough to prove that the assessment was wrong.

The Soviet attack was a total success. It resulted in the virtual destruction of Army Group Center with the loss of approximately 30 German divisions.⁶² The Germans were forced to shift forces north to stem the tide and moved six divisions including three panzer divisions away from the sector opposite the 1st Ukrainian Front.⁶³ It was at this point that Koniev finally did attack south of the Pripet Marshes and inflicted a major defeat on Army Group Northern Ukraine.

The German error was in basing their estimate on the most probable enemy course of action. Looked at from the perspective of terrain, logical enemy objectives, and templating the major Soviet armored striking forces, the German estimate was reasonable. Having arrived at this estimate, the Germans based their defensive plans on this one enemy capability. As the Red Army prepared for its summer offensive, the Germans did have substantial evidence of Soviet forces moving in opposite Army Group Center. The Germans made the almost inevitable same mistake that the Americans did at the Ardennes of seeing in this evidence confirmation of what they expected instead of evidence of a different enemy course of action. The Soviets saw and took the opportunity to surprise and defeat the Germans.

MANCHURIAN CAMPAIGN 1945

The Soviet campaign against the Japanese in Manchuria provides numerous examples of the ability of a mature Soviet Army to generate an extremely rapid advance by specifically seeking routes through the most difficult terrain. In nine days the Red Army advanced from 500 to 950 kilometers into Manchuria and forced the surrender of the Japanese and their auxiliaries.⁶⁴ The Red Army

conquered an area larger than all of France and Germany combined with an overall force of 1.5 million men against 713,000 Japanese and 214,000 auxiliaries.⁶⁵ While the campaign as a whole provides an excellent example of the ability of an attacker to achieve surprise by skilled use of unexpected avenues of approach, this paper will concentrate on the tactical surprise achieved by the Soviet 39th Army in western Manchuria.

As the Japanese analyzed their situation in Manchuria, the terrain in the west seemed to offer an excellent opportunity to delay or even defeat a Soviet attack. The Grand Khingan Mountains served as a major obstacle to invasion and were reinforced by a huge area of desert and arid steppe land to the west. The Japanese believed that "because of the waterless expanses lying before the mountain range, the only feasible avenues of advance through the mountains were the passes parallel to the rail lines that crossed the mountains from Halung-Arshaan to Solun and from Yakoshih to Pokotu."⁶⁶

The Japanese had fought the Russians in this very area at Khalkhin-Gol in 1939. Based on this experience they believed that it would be impossible to support an invading force of more than 50,000 men in eastern Mongolia and 150,000 more in that part of Siberia adjacent to west Manchuria. The lack of water and very poor transportation network in the area would not support larger forces. In actuality the Soviets ultimately were able to deploy more than 350,000 men into east Mongolia for the attack into Manchuria.⁶⁷

Based on their own experience against the Russians in 1938 and 1939 and foreign reports from their German allies, the Japanese probably felt they had a good understanding of Soviet doctrine. They expected a fairly stereotyped, inflexible approach to tactics.⁶⁸ What they got was a very flexible enemy who used maneuver extensively and displayed remarkable ability to adapt his

doctrine to the situation and then to apply tactical flexibility and initiative on the battlefield.

The Japanese plans to defend the pass through the Grand Khingans from Halung-Arshaan to Solun provide a good case study. Because they believed it to be one of only two feasible routes of invasion, the Japanese made extensive preparations for its defense. The Japanese 107th Infantry Division was responsible for this sector and prepared strong defenses through the entire depth of this avenue of approach. Although the pass was itself quite narrow with a river restricting lateral movement, the Japanese reinforced the terrain further with dugouts, trenches, pillboxes, and concrete field fortifications.⁶⁹ Although they were deficient in tank weapons, the commander of the the 107th Division was confident that he had a good chance of slowing or stopping a Soviet advance into central Manchuria.

The commander of the Soviet 39th Army took full advantage of the Japanese dispositions which made it apparent where the Soviet attack was expected. Rather than using the normal echelonment of forces, General Lyudnikov planned to attack in one echelon with three rifle corps abreast. One corps was to attack to the north to support the adjacent 36th Army. The main attack was to consist of two rifle corps lead by a tank division and two tank brigades. This attack would bypass the Japanese 107th Infantry Division and would cross the mountains to the south. General Lyudnikov planned to use only one division to attack into the pass to tie up and pin down the 107th Division.⁷⁰

The 39th Army conducted a 120 kilometer approach march from 2 to 6 August which made it impossible for the Japanese to recognize the point of attack until too late. When the 39th Army attacked on 9 August, it was spectacularly successful. In spite of extreme difficulty with the terrain,

heat injuries, and much higher than expected fuel consumption, the 61st Tank Division advanced 100 kilometers the first day. Simultaneously, the 124th Rifle Division engaged and successfully tied up the Japanese forces descending the pass. By 12 August, the main attack had crossed the mountains and reached the flank and rear of the Japanese 107th Division which was still being pressed by the 124th Rifle Division. By 15 August, the Soviets had defeated the 107th Division and were ready to continue their rapid advance into Manchuria.⁷¹

The 39th Army attack was only one of numerous examples in this campaign where the Soviets used terrain that theoretically should not have been able to sustain their doctrinal rates of advance.⁷² Like all commanders with limited resources, the Japanese commanders could not be strong everywhere. They concentrated their forces where it seemed likely that the enemy would most probably attack. Based on their knowledge of Soviet tactical doctrine, they expected a stereotyped attack along the good avenues of approach. What they got was an enemy who made audacious use of extremely difficult terrain and terrible weather conditions to bypass Japanese defenses and generate nearly unbelievable rates of advance.

CASE ANALYSIS

This paper has looked at three historical examples that suggest strongly how difficult it is to predict enemy courses of action prior to the battle. In each case the defender was surprised even though he had the equivalent of a good IPB available. There are several major factors that contributed to these failures of predictive intelligence which make any current claims to provide predictive intelligence based on IPB very suspect.

The IPB process relies heavily on the use of terrain analysis as a screen to assess the feasibility and, ultimately, the probability of an enemy

course of action being adopted. The theory is that an enemy concerned with making a rapid advance will tend to choose terrain that will facilitate rather than hinder that advance. Liddell Hart makes the strong case that this is often not true and that

a Great Captain will take even the most hazardous indirect approach - if necessary over mountains, deserts or swamps, with only a fraction of force, even cutting himself loose from his communications. . . . Natural hazards, however formidable, are inherently less dangerous and less uncertain than fighting hazards. All conditions are more calculable, all obstacles more surmountable, than those of human resistance.⁷³

It is very important to understand enemy tactical doctrine, but the evidence of these cases does not support using it as the primary tool to predict enemy courses of action. There are too many other variables that influence the enemy decision. The personality and style of the commander often have a greater influence on the course of action than the enemy doctrine. Yet, it is not always possible to know who is truly the commander of an operation. It is normal to evaluate the enemy one echelon above our own. However, in the case of the Battle of the Bulge and the Soviet Byelorussian offensive, the tactical defender would actually have had to look up several echelons all the way to the enemy national command level properly to assess enemy intentions.

Even if the tactical commander knows which enemy commander to consider, using doctrine as a predictive tool is not reliable. The Soviets for all their reputation as being rigidly doctrinaire have shown that skilled armies can and do flexibly adapt their doctrine to the circumstances. In fact, they have frequently and deliberately used enemy knowledge of their doctrine as a tool to deceive and surprise the enemy. Both cases examined in this study give some insight into the ability of a mature Soviet Army to adapt its

offensive tactics to the specific enemy situation and are highly relevant to current Soviet doctrine.

The defender in the cases studied and current IPB doctrine fail to consider adequately the dynamic relationship between enemy and friendly courses of action. An analysis that leads to a postulated most probable enemy course of action is normally used to decide upon friendly tactical plans. The flaw is that the attacking enemy has the initiative. He can and will modify his plans based on what he is able to learn about friendly forces. Even this response is not predictable because it is seldom known with any degree of assurance what the enemy actually knows about our forces.

In addition to these factors, a problem that seems to be consistent in these cases and could certainly arise with IPB is the development of a false sense of confidence that we understand enemy intentions. As one author wrote fifty years ago regarding predicting intentions, "Any commander who is addicted to this process and who has arrived at a conclusion as to what he considers 'enemy probable intentions' will interpret all subsequent enemy information in such a way as to reinforce his preconceived ideas."⁷⁴ This problem is no less true today than it was then.

The historical cases this paper has examined help show another potential problem with IPB, which is the entire concept of a most probable enemy course of action. It can be argued that the respective commanders and analysts at the time had performed reasonably sound assessments of the enemy and terrain and had identified most probable enemy courses of action. What is not generally considered is that when there are multiple possible courses of action, the most probable enemy course of action may well have substantially less than a 50 percent chance of occurring. Beyond this factor, we receive no benefit from properly and correctly assessing the enemy's most probable course

of action or actions if, for any reason, he adopts one that is less probable. In the end we must defeat the actual course of action the enemy adopts.

CONCLUSION - WHAT SHOULD IPB DO?

Clearly, IPB is an important step forward as a tool to provide a systematic way to analyze the enemy, terrain, and weather before the battle. It is important as a tool to evaluate the impact of terrain and weather on both friendly and enemy operations. It should certainly facilitate identifying various enemy capabilities. Based on the terrain analysis, IPB can help assess which enemy capabilities may be easier or more difficult to execute.

On the other hand, while current doctrine clearly calls for it, IPB does not provide a reliable basis on which to predict enemy action before the fact. As important as the terrain and enemy doctrine are to the enemy in planning his operations, they are only part of the equation. IPB provides no basis other than speculative assumption on which to identify enemy objectives. IPB does not have a mechanism to evaluate or incorporate what the enemy knows or believes to be true about our disposition, strength, and intentions. These have at least as much bearing on the course of action the enemy chooses as the factors that IPB does consider.

The currently unstated assumptions made in the IPB process must be explicitly identified and analyzed for their validity and impact on the results. It will normally be an assumption that the enemy will seek to attack on the best avenues of approach. These cases show how weak that assumption can be. The very idea that any specific commander will apply normal doctrine is also generally an assumption. It is never possible to be certain that he has not changed procedures based on his experience or even been overruled by a superior, as was Rundstedt. Because enemy objectives are often tightly

guarded, it will frequently be necessary to assume them. Yet, without knowing these, it is hardly possible to predict specific enemy courses of action. Knowing what assumptions he is working from, the analyst has some prospect of identifying feasible courses of action. He must be very wary of going any farther without substantiating evidence.

As has been previously pointed out, there is a vast difference between predicting enemy intentions and early identification of an enemy decision to execute a specific course of action. IPB can and does provide the basis to identify possible enemy courses of action. Then, through event and decision support templating, IPB provides the basis for situation development to identify quickly which course of action the enemy is executing. Regardless of how desirable it might be to predict in advance what the enemy will do, IPB can not realistically be expected to achieve this goal.

Finally, and not least important, IPB can greatly assist the commander to develop what Clausewitz, in discussing military genius, calls a "sense of locality". He points out that the importance of terrain is "decisive in the highest degree, [Emphasis in original] for it affects the operations of all forces, and at times entirely alters them." He goes on to discuss how important it is to be able to have an accurate understanding of the topography of an area.⁷⁵ As the battlefield has become vastly more extended since Clausewitz's time, this sense of terrain has become much harder to achieve. To the degree that IPB helps a commander improve his understanding of how the terrain will affect him and the enemy, it will make a major contribution to his success.

NOTES

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³ FM 101-5-1, Operational Terms and Symbols (Washington: Headquarters, Department of the Army, October 1985), 1-39.

⁴ FC 100-15, Corps Operations (Fort Leavenworth: CGSC, March 1984), 3-17.

⁵ FM 100-15, Corps Operations, Final Draft (Washington: Headquarters, Department of the Army, Feb. 1985), 3-30 - 3-31.

⁶ FC 71-100, Armored and Mechanized Division and Brigade Operations (Fort Leavenworth: CGSC, May 1984), 4-12.

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⁸ FM 100-5, Operations (Washington: Headquarters, Department of the Army, May 1986), 47.

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¹⁰ ST 100-9, The Command Estimate (Fort Leavenworth: CGSC, July 1986), A-1.

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¹³ MAJ A. C. Bevilacqua, "Combat Intelligence in a Maneuver Environment," Marine Corps Gazette, July 1985: 62.

¹⁴ FC 34-91, 3-1.

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¹⁶ FM 34-3, Intelligence Analysis (Washington: Headquarters, Department of the Army, January 1986), iv.

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- 19 FM 34-3, 4-9.
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71 Glantz, Tactical and Operational Combat, 149 159.

72 Glantz, Tactical and Operational Combat, 1-8.

LTC Glantz provides eight examples of Soviet tactical operations in Manchuria. In at least five of these cases he describes how the Soviets succeeded in achieving extremely high rates of advance by attacking through such unexpected terrain as roadless forests, swamps, trackless deserts, and rugged mountains. When the Soviets did attack on a good avenue of approach, it tended to be partly as a deception because it was expected and partly to tie down Japanese forces on those avenues.

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